

Read the Special Articles this Month on Medical Inspections In the Schools.

CALIFORNIA.~~STATE~~ BOARD OF HEALTH.

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REGULAR MEETINGS

The California State Board of Health meets regularly the first Saturday of each month, but the stated meetings of January, April, July, and October constitute the quarterly meetings required by law to be held at the Capitol of the State.

By courtesy of the University of California the Food and Drug Laboratory and the Hygienic Laboratory are located in University buildings at Berkeley, California.

Address all communications to the

SECRETARY, Sacramento, California.

FEBRUARY BULLETIN.

MEDICAL INSPECTION IN CALIFORNIA SCHOOLS.

The following series of articles has been written by the California pioneers in a movement destined to revolutionize our present day school curriculum and greatly increase its efficiency.

Medical inspection has not yet found its place in school organization. This is shown by the five distinct plans outlined below. Each plan has many good features, and it is only by such practical trials of these various plans as are now in progress that we may hope to arrive at what is best for our children.

A GENERAL PLAN FOR HEALTH SUPERVISION IN SCHOOLS.

By Dr. ERNEST BRYANT HOAG, Medical Director of Berkeley Schools, Lecturer in Hygiene, University of California.

The necessity for careful supervision of the health and development of school children is no longer open to argument. In the best towns and cities of the United States the people themselves are demanding such supervision as one of the most vital functions of the public school system. No school can any longer claim a place in modern educational progress which ignores or neglects the health conditions of its pupils. You can not properly educate a child who has not good health. One prominent school man has even gone so far as to say that, in the light of recent information relating to the health of school children, a community which neglects the systematic health care of its school population is guilty of criminal negligence.

ORGANIZATION PLAN.

Medical inspection, or as I much prefer to call it, health supervision of schools, is provided for by methods which vary all the way from desultory voluntary services to the complete, well paid, methodical plan of New York City. In general it may be safely stated that schools get just about what they pay for. One does not usually expect satisfactory service from a voluntary or poorly paid superintendent or teacher. Whatever sort of public service is worth having is usually worth paying for. Health officers in schools should, therefore, be regarded as any other employees of the school system. We frequently hear of a school medical officer inspecting several thousand children in a year, or even less time, while giving to this work only a portion (and usually a small one) of his time, and receiving for such work a pittance of \$200 or less. Now such a piece of work as this is sometimes worth just about what is paid for it, but more often its value is much less. No inspector can possibly cover several thousand cases yearly in a few hours per week, and do valuable work for the schools. Such a man is just what his name implies, an "inspector." He *inspects*, it is quite true, but he never *studies* nor *adjusts*.

To be truly useful, health work in our schools requires training, aptitude, time, and reasonable recompense. Except in cities where the health department is organized on a large and complete plan with its various departments in charge of well-qualified directors, the medical supervision of schools ought to be under the direct control of the board of education. This is true because medical work in schools naturally forms an essential part of our general educational system. It is a great mistake to think of such work as first of all *medical*, for it is first of all *educational*. It must aid the boy and girl in healthy growth and development; it must help the school to adapt its work to individual physical and mental conditions; it must assist in the correction of existing physical defects and in the prevention of others; it must teach the fundamental elements of preventive medicine; it should superintend the teaching of physiology and hygiene.

PARENTS NOT ALWAYS WISE IN HEALTH MATTERS.

If all parents were sufficiently wise in health matters, it would probably be quite unnecessary for schools to make any special study of the physical condition of the children entrusted to their care. All that could then be fairly required would be the guarantee of a healthful school environment, including such things as good ventilation, correct methods of lighting and heating, sanitary plumbing, the elimination of contagious diseases, frequent recesses, sufficient attention to physical education, and the proper kind of health instruction. But it is a fact and not a theory that not all, or even most parents, are wise in matters pertaining to the health conditions of their children. It becomes, therefore, the plain duty of the school department to furnish not only a healthful school environment, but also a careful guardianship of the personal health of its pupils. If medical supervision were synonymous with medical inspection, from which our present health work in schools originated, it would be very easy for one physician to inspect ten or more thousand children per year. With careful medical supervision the number examined will usually be far less. Medical inspection as it was ordinarily carried out merely contemplated the superficial examination of pupils for the detection of skin diseases and signs of the ordinary contagious diseases of childhood.

Medical supervision includes far more than inspection. It means the health study, in a broad sense, of the children in the schools, with an attempt to adjust them to their physical environment. It means a study of the conditions of sight and hearing, an examination for evidences of nasal obstruction, diseased tonsils, seriously defective teeth, disorders of nutrition and development, unbalanced nervous organizations, for signs of early heart or lung disease, for enlarged glands, skin diseases, and symptoms of children's common contagious diseases. The careful physical study of school children has, therefore, supplanted the early and inadequate method of inspection, and has shown clearly that there is an intimate relation between the child's physical condition and his mental progress and future success.

A PRACTICAL WORKING PLAN FOR A CITY.

In order to discover those pupils who most need physical attention, a plan can be devised whereby the teacher makes the first selection and

refers these to the examining physician. A convenient method is to furnish a card about 8 by 10 inches having printed on one side of it twenty-five arbitrary signs and symptoms of physical defects. These are expressed in terms which any teacher can understand and use. For example, terms such as the following are used:

Posture, nutrition, endurance, mental activity, appearance of teeth, mouth-breather, frequent absences, inattention, delinquency in studies, squinting or other signs of eye trouble, deafness, nasal voice, colds, offensive breath, signs of contagious diseases, condition of skin, cleanliness of person, vicious habits, home conditions, nervous symptoms.

READING THE HEALTH INDEX.

An intelligent teacher can observe points such as these among her pupils if she tries. This is what is called reading the "Health Index." A set of such cards is given to each teacher by the principal. The teacher fills in the parent's name, pupil's name, age, grade, and home address, at the top of the card, and then simply makes a check opposite the sign or symptom she has observed, as, for instance, "nasal voice." She may perhaps fill out ten or twelve of these cards in a room of twenty-five or thirty pupils. These cards are then handed to the principal, who in turn gives them to the school physician when he calls. The physician then calls these pupils to the principal's office one at a time. Here they are carefully examined and the results are recorded on the reverse side of the pupils' cards. This examination includes the eyes, ears, nose, throat, heart, lungs, skin, teeth, general physical appearance, and indications of any contagious or nervous disease.

THE WORK OF THE SCHOOL NURSE.

The school nurse should accompany the school physician on his visits to schools. When home visits are advisable for purposes of personal advice, explanation, or for other reasons, the nurse can note this fact during the physical examination and call at the home as early as possible afterwards. These personal calls are productive of much good and are nearly always received with manifestations of interest and with consideration. Sometimes the nurse can show parents how to construct a cheap sleeping porch for a child much in need of fresh air. This has accomplished much good in many of our Berkeley homes already. Sometimes the nurse can give suggestions about proper food for a school child. Many children in Berkeley who were drinking from a cup to a quart and a half of coffee daily have thus been set upon the right track and induced to discontinue the habit. Sometimes the nurse can provide means for attention to medical or dental conditions which would otherwise be neglected. Among the very needy, the nurse can personally dress many minor accident cases, take care of some contagious and other skin diseases, and care for simple eye inflammations.

The nurse often discovers conditions of home environment which explain many of the defects found by the physician in his examinations in the school. The relation of home health to school health is in many ways an intimate one, and the school nurse is indispensable in studying this relation and in providing means for the proper adjustment of many of the unfavorable situations she is able to detect in her personal visits.

Of the 115 different house visits made by the Berkeley school nurse during the fall term of 1909, practically 91 per cent of them were productive of some good results.

ACTUAL CONDITIONS DISCOVERED.

Of the first 750 children referred to the school physician by the teachers in Berkeley, nearly 70 per cent were found to be in need of medical or dental attention. Of these, the greatest number showed defects of nutrition, enlarged lymph glands, and badly decayed teeth.

Of 493 children in grades from the third to the eighth inclusive, we have discovered that 53 per cent use tea or coffee or both daily. This habit deserves more serious consideration on the part of parents and teachers than is usually given to it. Disguise it as we may, this is a drug habit, and while not necessarily of great importance in its effects upon adults, it certainly has seriously bad effects upon children.

Of the 493 children just referred to it was found that 25 per cent of them habitually sleep in unventilated bedrooms. This fact alone in some cases is sufficient to account for conditions of malnutrition and slow progress in school.

FOLLOWING THE CASES NEEDING ATTENTION.

Without an adequate system for following cases which have been found to need medical or dental attention, very little good can be accomplished by any method of health supervision. The following plan will be found to work satisfactorily, but no doubt other ideas will serve the purpose equally well. After a pupil has received his physical examination and the case has been recorded, send his card back with him to his teacher. Each teacher will thus have in her possession the record cards for those of her pupils who have received an examination. From time to time she must attempt to discover what attention the notice to the parent has received and record this on the pupil's card. Where no attention has been given to the case, the physician can be notified and a second notice sent home, together with an invitation to bring the child to the office for further examination and advice. In many cases it will be found necessary to provide medical or dental service for these cases in order to get anything done for the child. If possible some sort of a medical and dental school dispensary should be established. If this can not be accomplished, then arrangements can usually be made with individual physicians and dentists to care for such children at their private offices. Pure charity service ought usually to be avoided, but arrangements for very small charges must often be made. An advisory health committee, composed of several physicians and dentists, will be found to be of very great service in any school health department. It is very desirable in some schools to have the pupil's school standing, attendance, etc., on one side of a card and the physical record on the other. By this method it is often possible to explain retardation, slow mentality, nervous manifestations, etc., by the physical conditions found present. The school nurse should keep a careful card record of all her home visits and from time to time should inform the examining physician of the results she has obtained.

THE EMPLOYMENT OF A SCHOOL PHYSICIAN.

The question often arises as to whether a doctor ought to give all of his time to school health supervision in cities of some size. Arguments of value can be made on both sides of this question. The discussion usually adjusts itself, however, as few cities are at present willing to pay salaries which justify efficient physicians in giving up all of their time to this kind of medical specialty. It is the writer's opinion that men or women who devote only half of their time to health work in schools will usually give the best service. By this method better physicians can be induced to undertake the work than where all of their time is demanded. It is also true that physicians who are in touch with a variety of medical cases will generally prove more valuable to the schools than those who confine themselves to strictly school medical work. Health work in schools is of necessity very monotonous and extremely limited in medical scope. Therefore, the best service can not be expected from physicians who are not in touch with a large variety of cases outside of those found in schools. In time the medical officer who gives his time exclusively to school health work will almost inevitably fall into unfortunate ruts through the very nature of his routine occupation. It is sometimes possible to employ a school health officer who is also teaching hygiene in a university or other institution of learning, or who is a city or county health official or a bacteriologist. In these instances the combination works quite satisfactorily, even though the individual may not be engaged in actual private practice.

A competent physician in the schools should be well paid. The office can never be one of dignity if he is not. In general, it may be said that such an official should receive the same salary for one half of his time as is given to the best paid principal in the same city for his full time. On this basis the best of medical talent can be obtained, but on any other salary basis efficient service will rarely be secured. The real danger of a school health position degenerating into a political job must not be forgotten.

A PLAN FOR SMALL COMMUNITIES.

In small towns and in the country it will often be found quite impossible to organize a school health department on anything except the simplest basis. Sometimes it will be found quite hopeless to attempt to employ either an examining physician or a school nurse. In such instances the teacher herself must learn how to read the health index of her pupils, and advise the parents that the child ought to be taken to the family physician, dentist, or specialist for a thorough examination. Many times it will be possible for the principal of the school to make it his particular duty to read the health index of all the pupils in his school. In small communities it is sometimes feasible to employ a physician to spend a very limited amount of time in the schools, where he may coöperate with the principal or the teachers in making physical examinations. It will usually be found best for teachers to confine their work to *general inspection*, calling in the physician to confirm their observations by more careful examinations. Voluntary medical service is frequently offered, but it is rarely advisable to accept it for reasons that are self-evident. Even the smallest places can afford to pay for a limited amount of medical advice in schools. At least twice

each year a physician ought to make a careful *health survey* of the sanitary conditions of all school grounds and buildings and this should be done only by a doctor specially qualified for such work. Many good physicians have never had experience or training in school sanitation. In small counties it may be possible to employ a physician to supervise the health of all schools in the county. If cities such as Pasadena, where 421 of the first 706 pupils examined were found to be in need of medical or dental attention, or about 60 per cent, and if about 70 per cent of the first 750 examined in Berkeley were found in the same condition, it would appear that there can be no good argument against the necessity for medical supervision in all of our public schools.

SOME DETAILS OF THE PHYSICIAN'S EXAMINATION.

By Dr. E. B. HOAG.

In examining the throat, wooden tongue-depressors, which may be used once only and then discarded, are absolutely necessary. In testing eyes, no special light apparatus is necessary. All that is required is the Snellen Test Type Card and good daylight. In testing the hearing a stop-watch is desirable because the answers of children are often very deceptive. Each eye and each ear must be tested separately. It is well to test the color sense while testing the eyes, and for this purpose colored discs or yarns may be employed. Experience is required in testing the eyes of children because they often transpose, misread, or omit letters. Many children find some difficulty in reading the 20/20 line, and for practical purposes I believe that the ability to read the 20/30 (oculists' opinions to the contrary notwithstanding) should be considered satisfactory unless other signs of eye trouble are present.

The ordinary star-shaped astigmatism test card is valuable in routine eye tests. Special care should be directed to the *squint* or "*cross-eye*." Very few people understand that the squint or cross-eye nearly always becomes *blind* unless it receives early care. It is important for parents to know that cross-eye can very often be corrected by the early use of proper glasses.

The importance of seeing that parents take their children to *oculists* and not to opticians can not be overstated. Many parents of school children patronize the "doctor" in the rear of a jewelry store, unless they are carefully instructed to the contrary.

The importance of observing crooked and prominent teeth must not be overlooked. This condition, as is well known to careful examiners, is usually due to *adenoids*. Adenoids can indeed be usually diagnosed by the facial expression, the appearance of the teeth, and the *high arch* of the hard palate. An examination with the finger is rarely advisable or necessary. The relation between deafness, earache, discharging ear, and enlarged tonsils, on the one hand, and adenoids on the other, must always be kept in mind.

Rather large tonsils are common in young children even when no diseased condition is present, and, as is well known, this condition tends to disappear of itself. Unless the enlargement is excessive I do not believe that such tonsils always indicate the necessity for medical or surgical treatment. It is often a part of a general lymphatic enlargement.

An ordinary nasal speculum used without special artificial means of illumination is all that is necessary in routine work on the nose. Even the speculum may usually be dispensed with. Polypi are very easily diagnosed from symptoms of obstruction and nosebleed. Enlarged turbinates in school children are in my experience rare.

The examination of the *heart* is very important. With a Bowles stethoscope or a phonendoscope, the necessity for the removal of the clothing is avoided. A skillful examiner can always detect murmurs in this way. When they are discovered a more complete examination with the chest bared can be made to determine the presence or absence of *hypertrophy* or *dilatation*. Murmurs on the left side in the second interspace are so commonly found as to be negligible. They are practically always accidental or functional. A certain amount of enlargement of the heart during the rapidly growing age, especially near the age of puberty, we all know to be common and of no great consequence. In this condition, however, boys and girls ought to be cautioned about athletic strains or excessive exercise of any sort.

Functionally weak hearts among children are often encountered, and appropriate advice ought always to be given in these cases. Such hearts are found more especially among girls of the high school age. Students of this age also need careful examinations for incipient tuberculosis. Unless there are special indications for it, a careful examination of the lungs is rarely necessary in grammar grade pupils. Such examinations are indeed quite impossible unless the clothing be removed, which is not often advisable. An important matter of technique, however, is a rough test of the ability to expand the lungs and chest. It is truly astonishing how few pupils know how to breathe properly. This they must be taught.

More important, perhaps, than all else is a careful examination of the teeth. The neglect of the first teeth is practically universal, and even the second teeth need attention in probably 60 per cent of the children of most schools.

As a matter of routine, an examination of the lymph glands of the neck is important. Enlarged glands are often associated with bad teeth, tubercular conditions, and general malnutrition. It is my observation that really healthy children rarely show even moderate enlargement of these glands.

Rough tests of muscular control, coördination, etc., may always be made quickly and easily. Incipient chorea (St. Vitus's dance) will often be noticed in this way. Sex examinations, however desirable they may be, are not to be recommended at present except with the consent and presence of the parent, and at his request.

Lastly, the general posture, state of nutrition, color, and cleanliness, of these little folks must be taken in at a glance by the examiner.

After completing the cards from a given room, the physician visits the room himself and observes the pupils at work. He will probably detect some cases which the teacher has overlooked. He will also observe the conditions of temperature, light, and the general sanitary surroundings of the pupils. By this plan of office examination and personal inspection, the physician gradually covers every room in the building. It is needless to say that tact and understanding of children are most essential in this work.

The teacher receives the cards belonging to her room after the examinations have been made of her pupils, follows the cases as far as possible, and makes a monthly report to the physician. If this is not done, the school physician soon loses all knowledge of the cases he has examined. When teachers are aware of the physical embarrassments of their pupils, they are then in a position to treat them more intelligently in their daily school work. Whenever the examining physician discovers physical conditions which need attention, a notice is sent the parent of the child suggesting further examination and advice from the family physician, dentist or specialist, as the case may require, and offering the opportunity for further advice at his office.

MEMORANDUM.

Berkeley schools have introduced paper individual towels and liquid soap containers in all schools for the accommodation of both pupils and teachers. Daily disinfection of floors and desks, and damp sweeping and dusting have also been introduced. It is hoped in this way to reduce the number of contagious diseases.

The School Health Department is also making a school contagious disease map of the city, to determine if possible the centers of infection of the various children's diseases.

Sanitary drinking fountains in the form of an inverted spring faucet have been placed in all school buildings. The *cup* has been abolished.

Contagious diseases were reported during the month of February, as follows:

Measles	67
Chicken pox	7
Scarlet fever	6
Whooping cough	6
Mumps	1
Typhoid	3
Para-typhoid	1
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DEPARTMENT OF HEALTH AND DEVELOPMENT—LOS ANGELES CITY SCHOOLS.

By GEORGE L. LESLIE, M.A., Director.

The work of this department in the Los Angeles city schools is essentially as follows:

a. All matters pertaining to contagious diseases are under the direction of the City Board of Health, which employs a staff of physicians and school nurses to attend to this work.

b. All matters pertaining to noncontagious defects—to health, growth and development of pupils and teachers, are under the control and direction of the Board of Education, and conducted in accordance with the health and development law of California.

Los Angeles employs a health and development staff of examiners, composed of educators and physicians who carry forward this work.

This staff is not sufficiently large to examine all pupils. The annual examination of all pupils is advisable. The staff examines approximately 50 per cent of the pupils of each school building, selecting,

First—Pupils who failed to be promoted.

Second—Pupils, two, three or more years behind school grade.

Third—All pupils selected by principals and teachers as needing medical aid (glasses, surgery, etc.).

Fourth—All pupils of low vitality, unduly nervous, pupils not getting on well in their school work, pupils who need an unusual amount of discipline or those with criminal tendencies, etc.

In a word, the staff examines the pupils whose need is most marked. This comprises from 40 per cent to 50 per cent of the pupils of the schools examined. When the staff is sufficiently large all pupils will undergo annual examinations.

Fifth—All applicants for positions as teachers in the city schools undergo physical examination by the staff. All teachers in the schools report for examination when requested by the superintendent's office.

Sixth—Especial examination is given to exceptional children.

Seventh—School buildings are inspected by the staff.

Eighth—Follow-Up-Work is carried on by the staff, by principals and teachers of the schools.

Parents are notified of defective conditions of their children, are met at the school buildings or at the health laboratory, and otherwise aided (as far as is needed in this matter), as far as is within the power of the schools to give aid.

The establishment of an excellent school nurse department, under the direction of the Board of Education, is a movement of the near future. Such department is already begun. When such department has become strong and effective, the "Follow-Up-Work" will be much more efficient.

The Juvenile Improvement Association donates a fund to supply glasses to parents financially unable to secure them.

The Eye, Ear, Nose and Throat Section of the County Medical Association has perfected a most helpful plan of supplying necessary medical aid to the schools and homes. By this plan the director and examiners of the Department of Health and Development are able to recommend specialists to parents desiring such recommendation—further, to provide medical aid to children of such parents as are not able to meet the entire expense of such aid. By such plan the department is able to make the work much more effective.

Principals and teachers coöperate with the examining staff and school nurses in this work. There has been a good response on the part of the parents to this action of the schools. Effective, persistent effort on the part of the schools in this regard reaches nearly all pupils needing help. Without such effort approximately one half of the pupils needing help remain without needed aid.

The enclosed examination card illustrates the character and scope of the work by teachers and staff.

Teachers are instructed by the staff in the marking of these health and development cards, which cards accompany the pupil from grade to grade.

The enclosed notice illustrates the notice sent to parents.

Lecture work in Parent-Teachers' Associations augments the work. The Parent-Teachers' Associations have taken active steps to forward the work in the city.

SUMMARY OF EXAMINATIONS OF LOS ANGELES CITY SCHOOLS.

Approximate Summary of Ten Months' Examinations.

A. All pupils examined by staff.

Enrollment of schools when examined.....	6,647
Number hastily passed upon by examining staff.....	2,808
Number thorough physical examinations.....	3,846

Report of Physical Examination.

Number defective in eyesight.....	2,012
Notices sent to parents.....	900

1,112 to be watched by teachers and examined further if pupil's health or school work indicates further examination.

Number defective in hearing	862
Notices sent to parents	175

Most of the defective hearing is due to adenoids and diseased tonsils and lack of care of the nose and throat. For this reason special notices of defective hearing were not sent to parents where the cause was otherwise clearly indicated.

Number defective sets of teeth.....	1,395
Notices sent to parents	1,395
Adenoids present	1,322
Notices sent to parents	6,670

652 to be watched by teachers and reëxamined if defective hearing or lowered vitality indicate such examination.

Number abnormal and diseased tonsils.....	1,517
Notices sent to parents	669

688 cases to be watched as in case of adenoids.

Poor lung action and chest development: hard to judge accurately.	
Functional heart insufficiently	314
Notices sent to parents	70
Organic heart disease	66

B. Special pupils only examined.

Report of physical examinations of pupils, selected by teachers and examiners, because the need of examination was indicated by poor health, lowered vitality, or poor school work—all pupils undergoing the physical examination by examining staff. Notices sent to parents in almost all cases.

Number examined	1,129
Defective in eyesight	434
Defective in hearing.....	259
Defective teeth	446
Adenoids present	319
Abnormal and diseased tonsils.....	332
Functional heart insufficiency	144
Organic heart disease	33

The above pupils were pupils especially selected from different buildings, or pupils of ungraded rooms, or of the special schools, or of the deaf school, or office examinations.

Total number examined for the year, 7,776.

Report of defective growth and vitality and school work accompanying these defective pupils is hard to make. It is mostly measured by the number of repeaters in the schools, by considerable sickness and disease, and by more or less inefficiency and degeneracy.

Report of Health Examinations of Teachers for Positions in the City Schools.

Number of teachers examined.....	107
General health below average: hard to judge accurately.	
Error in vision uncorrected, 25; wearing glasses, 23.....	48
Hearing below normal (slightly)	13
Throat only fairly healthy	29
Functional heart disturbances	12
Organic heart disease	5
Lung action below normal	13
Disturbed digestion	10
Slight pelvic weakness	5
Nerve force reduced (somewhat)	15

RESULTS TO BE NOTED FROM EXAMINATIONS MADE.

As a result of the examinations made this year the following facts stand out:

1. The rapid increase of defective eyesight from the first to the fifth grades. The too large use of the immature eyes of childhood in the book-work of the schools can only result, not only in injury, but in depleted vitality and growth and nervous instability.

2. The large percentage of adenoids growth and enlarged tonsils present in pupils (36 per cent of those examined). Ninety-five per cent of all subnormal hearing of school pupils is due to this cause, to say nothing of resulting lowered vitality and defective development. The rapid falling out of school of these adenoids pupils at from the fourth to the sixth grades, the defective hearing of from 15 to 20 per cent of the pupils of the seventh and eighth grades, and a certain percentage of high school pupils, all witness the evil results of neglect in this regard.

3. The overschooling of nervous pupils whose more or less unstable nervous system can only be made more stable by more out-of-door life and muscular activity.

The school activities for unduly nervous pupils ought to be such as to fortify the nervous system against nervous weakness and decrease nervous instability. Nervous instability is a condition of development which can be increased or decreased continually during the growing years of life, and its decrease ought to receive most careful attention in the schools.

To this end motor activities, physical training, manual training, nature study, and elementary science. These activities have a larger place in school curricula. Brain growth and nutrition, the building of a stable nervous system, ought to have the first place in education.

These activities are necessary for the best circulation, respiration, growth of the association fibers of the brain and those activities involving sense training and racial. *It is just as important to supply these motor activities, corrective physical training and sense training remedies for defective brain as it is to supply glasses or to supply surgery.*

4. The large number of physical defects exhibited by those failing to be promoted and those irregular in their work in the grades, and the large number of high school pupils who have already lost many of the possibilities of growing their years—not only are these defective conditions abundant in all the schools, but also poor physical and mental development and much of needless degeneracy. These witness as yet the failure of the home and the school to make all that is possible out of human life.

5. The marked good that could be done by more careful attention to physiological age and nascent periods of children and youths, and by the adjustment of school work to relieve stress and strain at the *transition periods of development*, when the results of poor inheritance tend to crop out.

The most serious side of overpressure at the transition periods (7-9 years; 13-15 years) is not the nervous breakdown, or the outburst of ethical defects, or of juvenile crime, but the undermining of life efficiency of adult years—the unsuspected and unknown lowering of vitality and efficiency.

Nascent periods are the periods at which, if struck at white heat, the mind begins new growths, acquires new and permanent bent, culminating in the acquirement of new power, which means much for the good of the future man or woman.

At these times may be utilized the upward push which the adolescent receives *from nature more than* at any other time. The intelligent adjustment of home and school activities at these times makes for excellence rapidly; neglect means degeneracy.

Physiological age. Sooner or later the main data which enter into the intelligent handling of pupils must depend to a greater or less degree upon physiological age, the physical and mental endurance of children and youths; the character and kind of work should be adjusted primarily to physiological, not *chronological age*.

THE BASIS OF EDUCATIONAL WORK.

From the standpoint of development, the basis of our educational work must change if excellence and not degeneracy is the result. Health and growth must be the basis upon which our school curricula are constructed and applied. *It is far better to have health and to grow well* than to know a little more or less of any or all of the informational work of the school. Education must be based upon health and development processes, and the adjustment of activity to the strength and capacity of the individual child or youth.

Compulsory education and compulsory care of the health and growth of pupils go hand in hand. When the State for its own protection compels the school attendance of children and youths, it pledges itself not to injure itself by failure to bring about the right health and growth and efficiency of pupils. The enforcement of the compulsory attendance laws commits the schools to this work.

The segregation from the schools of these pupils of markedly defective conditions, which interfere with the growth and development of the pupils to too great extent to permit of their proper handling in the usual order of school work, and their education in special schools, forms an important work of this department. For this

purpose a hospital school, in which exceptional pupils can be given experimental training for sufficient time to determine their special needs, should be established.

THE COST OF DOING THIS WORK.

It has been estimated that in fifty-five leading cities of the United States there are over 300,000 pupils "repeating" school work at a cost of approximately \$14,000,000, roughly at a cost of \$50 per pupil annually for one sixth of the school enrollment.

It is a fair estimate that 50 per cent of this repetition might be prevented if physical defects were effectively corrected and school activities adjusted to health and growth needs.

The cost, then, of not doing this work effectively is enormous in money values (for Los Angeles over \$100,000, to say nothing of the loss of life efficiency of the future citizens of the State).

SEVERAL INTERESTING BLANKS IN USE IN LOS ANGELES.

JUVENILE IMPROVEMENT ASSOCIATION LOAN.

LOS ANGELES, CAL.,, 191....

As soon as I am able I hereby agree to pay Dollars to the Treasurer of the Juvenile Improvement Association of Los Angeles, Cal., in payment of a loan made to me by said Association to procure glasses for my SON

DAUGHTER attending school at the school at this date.

NAME

ADDRESS

Approved:

PRINCIPAL OF SCHOOL.

.....
FOR JUVENILE IMPROVEMENT ASSOCIATION COMMITTEE.

LOS ANGELES, CAL.,, 191....

To

OPTOMETRISTS.

LOS ANGELES, CAL.

Messrs:

Please credit with dollars

HIS SON
on cost of glasses for HER DAUGHTER attending school at this date at the School. Charge the same to Treasurer of the Juvenile Improvement Association of Los Angeles, Cal.

Note:

.....
Please send bill to FOR JUVENILE IMPROVEMENT ASSOCIATION.

.....

Form 171.

LOS ANGELES CITY SCHOOLS.

REPORT TO PHYSICIAN.

....., 19....
To Dr.

Address

This card will be presented by father or mother of, one of the pupils of the city schools, who desires further examination and medical aid, if after more thorough examination by yourself such aid is deemed advisable. They have asked us the name of a competent eye, ear, nose and throat specialist.

The school examination indicates

Family Physician, Dr.

.....
Dept. Health and Development, Los Angeles City Schools.

We are satisfied they are unable to pay the customary fee.

LOS ANGELES SCHOOL DEPARTMENT.

Form 265

LOS ANGELES, CAL.,, 191....

TEACHERS' HEALTH EXAMINATION.

To Dr. E. C. Moore,
Superintendent of City Schools.

The investigation relative to the physical condition of
.....
an applicant for the teaching staff of the Los Angeles City Schools, results in the
following:

PHYSICAL EXAMINATION.

Past health (give severe illness and injuries)
State of health at present
Eyesight
Hearing
Nose and throat
Heart action
Lungs
Digestive system
Functional condition
Remarks, physical condition
Subsequent examination advised not necessary.
Respectfully submitted.

.....
PUBLIC SCHOOLS HEALTH LABORATORY.

SUGGESTIONS ON HEALTH AND DEVELOPMENT OF PUPILS.

CONTINUED EYESTRAIN undermines the nervous system, interferes with nutrition and growth, limits the ability and usefulness of any boy or girl, man or woman.

ADENOID GROWTHS AND ENLARGED TONSILS.—Few realize the danger that results from these abnormal conditions which interfere markedly with physical and mental growth, with vitality, efficiency and strength and, further, are the most frequent cause of catarrh and middle ear troubles and general poor health and growth.

DEFECTIVE HEARING.—A large majority of the cases of ear trouble accompany diseased conditions of nose and throat. Approximately 95 per cent of the defective hearing of pupils is due to adenoids. Approximately one pupil out of six in the public schools is defective in hearing. The foundation of deafness in later life in most cases is laid in childhood by neglecting to give nose and throat the proper care.

THE TEETH.—The care of the teeth is of more importance than a large majority of parents appreciate or know. Unclean and decaying teeth may be a serious source of infection, a means of conveying into the system the germs of many transmissible diseases—may cause indigestion—poor nutrition—enlarged tonsils the second set. There are large numbers of pupils in the schools with uncared-for teeth. This condition needs the serious attention of home and school.

RESPIRATION AND CIRCULATION.—The best physical and mental growth is not possible with poor circulation and breathing. Nothing is more essential to mental growth and success than good chest development, lung action and vigorous circulation.

NERVOUS CONDITION.—Nervousness among pupils may be due to a defective nervous system or simply to physical defects (most commonly eyestrain or adenoids)—to overstudy and to too much indoor life and lack of physical activity. Nervous pupils especially require a large amount of out-of-door life and physical activity to strengthen and steady the nervous system. A large amount of the nervousness of pupils could easily be remedied by removal of physical defects, right activity and right environment.

AT CERTAIN TRANSITION PERIODS (7-9 years) (12-15 years) inherited weaknesses tend to outcrop. Pupils (especially those weak or frail) should be intelligently guarded at these periods by right home and school activities and by the correction of physical defects. Again there are special times in the lives of children and youths at which the mind apparently begins new growth, acquires new power rapidly. The intelligent adjustment of home and school activities to health and growth needs at these times make for excellence—neglect means degeneracy.

GROWTH is an expensive process. Children and youths can not use the energy and strength *needed for growth* in the doing of too much mental work, physical work, factory work or otherwise without sustaining permanent injury. A certain amount of physical activity is essential. The best mental growth *is not possible* without it.

ARRESTED GROWTH.—To allow children and youths to continue year after year with *physical defects uncorrected*, or to keep them engaged in work or under conditions which *limit physical activity* needful for good circulation, respiration and good mental growth, to fail to adjust home and school activities to health and growth needs is to *arrest growth* and thus bring about more or less mental incapacity and failure.

THE SCHOOLS.—The schools are making an earnest effort to make possible for pupils better health and higher attainments. This notice is sent asking the coöperation of parents and urging the importance of the work.

GEO. L. LESLIE,
Director of Dept. of Health and Development.

E. C. MOORE,
Superintendent of Schools.

REPORT OF DEPARTMENT OF HEALTH DEVELOPMENT AND SANITATION IN THE OAKLAND SCHOOLS.

By N. K. FOSTER, M.D., Director.

* * * "I inclose with this a short report which I made to the school board a week or more ago. It covers the work I have done during the first half of the school year. * * * Of course the great need is for more professional help. The School Board has already given me two nurses who are doing the "follow-up-work." This is a great step in advance, and I hope before another year to have more nurses and a doctor who can help me with the examinations. The teaching of hygiene and sanitation I consider of great importance, and I look forward to the time when we can have it distinctly taught from the primary grades up. To regulate the children in their grades is something that should be taken up and scientifically handled. It is detrimental both to the defective and the well to keep the former with the latter in the same grade, largely on account of age. Of course, this is not done absolutely, but at the present time the age is a great factor. The bright should not be kept back by the dull nor the defectives. * * * The results that we are getting are highly satisfactory. A principal reported to me yesterday that 66 per cent of those reported by me as defective had already received treatment and benefit. This, without any "follow-up-work" from my department. Of course he was a *live* man and took an interest in the work, an interest which could not help but be infectious. Not all will do as well, but in all the schools the work is being kindly received and people are getting acquainted with it and like it. All in all the outlook is a hopeful one and I see no reason to be discouraged."

* * *

[Extract from letter from Dr. Foster.]

To the Honorable Board of Education, Oakland, California.

GENTLEMEN: I desire to submit for your consideration a brief report of the work done during the first half of the present school year by the Department of Health Development and Sanitation of the Schools.

The first serious work that presented itself was the adoption of a series of blanks on which to keep our records. While the examination of school children for physical defects is not entirely new, there is no uniformity in methods and none of the blanks used are entirely satisfactory. After studying those of many different cities and repeated consultation with the superintendent, we adopted a form which is a modification of the one used in New York. While it has its defects, it is generally satisfactory. It is intended to run through the entire school life of the child, and gives a fairly good record of the child's condition. It being impossible to examine each pupil and thus find defective ones, it seemed best to have the teachers select those who to them appeared sufficiently defective to be retarded in their work and report them to the examiner; thus a certain portion of the blank is composed of questions for teachers to answer. These answers give a good idea to the examiner of the condition of the child as seen in his every-day school life. After the teacher has filled out the blank the examiner takes the child to the office in the school or to some quiet room and examines for any defects, whether enumerated on the blanks or not, making a record of the defects in the column indicating the child's grade. A blank is then filled out and given to the child to take home, stating the conditions found, and requesting that attention be given. The record is made in duplicate, the carbon copy is left in the school and the original is kept in this office, where the records of each school are kept by themselves and the names of the children arranged alphabetically. This, in brief, is the system of examination and records; it is by no means perfect, but with limited means and help, it seems the best. When the teachers are careful and critical in their selection, we get a large share of the defective pupils, and the information the teachers can give is very valuable, but it is inevitable that many children who should receive aid are passed by. This can be obviated only by an examination and record of each child.

During the term we examined between 1,500 and 1,600 children who had been selected by the teachers. Of these between 200 and 300 were not enough defective

to require notice to be sent to the parents. They were quite generally simply slow in developing and did not require medical or surgical aid. There were, however, 1,282 who were defective to such a degree as to retard them in their progress. They were divided as to defects as follows:

Vision	485
Hearing	226
Defect of nasal breathing	251
Teeth	431
Palate	4
Orthopedic	8
Serious disease of lungs	7
Disease of nerves	7
Disease of skin	11
Disease of tonsils	424
Disease of heart	6
Adenoids	217
Enlarged glands	246
Malnutrition	66
Many of the children had more than one defect.	
Number with one defect	411
Number with two defects	492
Number with three defects	263
Number with four defects	45
Number with five defects	13
Number with six defects	6

In most of the cases examined the defects could be remedied and a vast amount of vital energy which is now wasted could be saved. There are many children below their normal grades simply because they are suffering from some defect, and the removal of the defect will aid the child in its progress. A great many of the parents are receiving the information with expressed thanks and are having the desired work done. On account of the expense some can not do so, and a certain number are careless and put it off until it is forgotten. A very few rebel and consider that their sacred rights are being trampled upon. The largest number of the afflicted are in the lower grades and comparatively few in the high school. The reason for this is plain—severe sickness is more prevalent among the defectives, and, as a result, many of them die before reaching the high school. Besides, the defects blunt the intellect and discourage the children, and they do not care to go on through the upper grades. Nature has also come to the aid of the child in some cases and remedied in a measure the trouble.

In the high school we adopted an entirely different system of work, one corresponding with existing needs. We divided the students into classes of about fifty and gave them a half-hour lecture on themselves, their habits, sex relations, etc. The girls and boys were separated for these lectures, the lectures to the girls being given by Dr. Florence Sylvester, who also volunteered her services for two half-days a week during a considerable portion of the term to examine pupils in the school. On account of the vast amount of work to be done, this help was thankfully received.

Out of the 1,300 pupils examined, 66, or 5 per cent, are suffering from malnutrition to a degree that decidedly retards them in their school work, and all are likely candidates for tuberculosis. This does not take into account the very many more who are suffering from want of proper nutrition in a lesser degree. The causes for this trouble are various—a certain number are too poor to have enough food, but there are more who have enough money spent on their food, but buy improper kinds or spoil it in preparation. There is still another class who live in such unhygienic surroundings that they can not thrive. These latter classes we confidently hope and expect to gradually reach through a well equipped school nurse service, which you have so wisely established. The vast amount of tuberculosis is largely recruited from those suffering from malnutrition, and if we ever stamp out this disease or very materially lessen its draft upon our vital resources, we must begin with the children. They must be educated in the proper methods of living—this we are trying to do by repeated talks to the children, to mothers' clubs, to teachers, and by the influence of the nurses in the home; but the school life should also be such as will improve instead of damage physical conditions and at the same time be an object lesson in living. For this purpose I believe that an "Open Air School" should be built, where the weak and poorly nourished children can be taught. Until such time, two rooms, one east of the lake and one west might be provided. This should in no sense of the word be a school for sick children or those afflicted with open tuberculosis. Such children should not be in school with others, but in one by themselves. The open air school should be for the weak ones who lose ground in the ordinary schoolroom.

The sanitary conditions of most of our schools are excellent, but in a few instances they are not what we could wish. Perhaps, however, they are as good as can be had with the buildings at hand. I have urged upon the janitors the necessity of keeping everything clean, rather than destroying odors with deodorizers. The system of sweeping with a broom or brush and stirring the dust into the air to settle on walls

and furniture is bad, and should be discontinued when possible and a vacuum system substituted. Until that time the floors should be sprinkled with sawdust moistened with disinfectants before sweeping. I have investigated quite thoroughly the different disinfectants and have found one, which to my mind is the best for the purpose. (A sample of this is in my office.) The floors of the schoolrooms and halls should be treated with dustine, which in a great degree lessens the dust nuisance. The common cake of soap used by one and all is a menace to health, and I would be glad to see a soap supply furnished that would not be dangerous. There are several appliances used for this purpose, but whether they would not excite the destructive propensities of the ordinary boy to such an extent that would make them impracticable is a question. They could at least be tried in the lavatories for teachers.

OUR UNIVERSITIES.

In a subsequent issue of the Bulletin it is proposed to include the details of health supervision and instruction in the California universities and professional schools. It may be stated here, however, that both the University of California and Leland Stanford Junior University make very extensive provisions for the health control of their students. The following letter is sent out by Stanford University in an effort to place in the hands of each prospective student advice which may be discussed with his or her parents and family physician before leaving home.

LELAND STANFORD JUNIOR UNIVERSITY.

COMMITTEE ON PUBLIC HEALTH.

Stanford University, California,

Dear

The University authorities require an accurate history of the health and a statement of the present physical condition of each entering student. Will you kindly fill out the enclosed blanks fully and return at your early convenience? You are advised to consult your parents and your family physician before writing out your answers. When practicable the committee desires a written statement from your physician summarizing his advice concerning matters bearing on your health while attending the university.

As a general rule students do not seriously consider their physical needs in planning university courses. It is especially important that students, during their *first year*, should so arrange their work as to have ample time for the *outdoor life* and *regular* exercise necessary to a good physique and sound habits of personal hygiene. The following facts are suggested for your consideration in making your plans.

1. **SELECTION OF ROOM.** All rooming and boarding houses open to students are inspected, and convenient reference lists of those approved are kept for use of students. Students are not permitted to remain in the University who do not live in houses on these lists. Rooms on the campus are difficult to obtain. From one to three hours daily is required for going to and from lectures and laboratory work by students rooming in Palo Alto, College Terrace, and other community residence districts. Students rooming on the campus and arranging for board elsewhere must also set aside a similar number of hours for this purpose.

2. **ARRANGEMENT FOR TABLE-BOARD.** The University campus and each of the surrounding residence districts offer a variety of boarding arrangements, both with and without rooms, but students are *strongly* advised to arrange for table-board which is thoroughly wholesome and of ample variety. Students who share the work in coöperative clubs or arrange to do light housekeeping individually are expected to allow sufficient time for it in planning their University schedules. The average time devoted to this purpose may be stated as the equivalent of from one to two "*units of University work.*"

3. **SELECTION OF UNIVERSITY SCHEDULE.** The University provides that students may not register for less than thirteen units nor more than eighteen units of regular work without the special permission of the Committee on Registration. One "*unit of University work*" means the equivalent of three actual hours of study and recitation daily (five days in each week) for one half the college year. The average students' schedule of fifteen units each semester means, therefore, forty-five hours per week of actual application to recitation and study. This is an equivalent of nine hours daily of work, which requires more concentration and a greater expenditure of energy than the average working day of business or professional men, because it constantly demands the mastery of new thoughts and new methods. Many students are not able to carry such heavy work continuously through the average course of four years. The elective system and the Monday-Wednesday-Friday and Tuesday-Thursday arrangement of lecture courses offer temptations to overcrowd certain days of the week and bring about an undesirable irregularity in the daily schedule. Students are advised to make a careful estimate of the time required for all the necessary duties of a typical week, and to arrange their schedules with reference to an even distribution of those duties over all the days of the week. Many students very wisely register for only thirteen units the first semester, using the equivalent of two or more units as "reserve time" for additional reference reading or for unrequired work in courses of special interest.

4. PLANS FOR RECREATION. An average student's day's order may be said to require eight hours for sleep, two hours for transportation, three hours for meals, nine hours for study—a total of twenty-two hours, leaving two hours daily for recreation. These hours should be as regularly employed for genuine exercise and "fun" as any others in the schedule. Such estimates vary with individual habits and needs, but students during their first year are especially given to indiscretions in the amount both of work and of social and other activities they attempt, and the importance of recognizing the necessity for rational living while attending the University can not be overestimated.

5. PROVISIONS FOR ILLNESS. During the college year the committee on public health provides a schedule of daily office hours for consultation with students wishing advice on any matter relating directly or indirectly to their health. When medical treatment is necessary the services of thoroughly competent local practitioners are readily available. In illness requiring hospital facilities the Students' Guild provides all necessary nursing and general care in a fully equipped infirmary.

I shall appreciate an early return of the blanks properly filled out, whether or not you have fully decided upon entering Stanford University. The questions are intended to be suggestive only, and you may write as much at length concerning the condition of your health since birth as you desire. Your report should state your age, weight and height, whether you have ever been successfully vaccinated; whether you will try to earn your expenses while in college, and whether you will plan to do part or all of your own housekeeping.

Very truly yours,

[Signed.] WILLIAM F. SNOW, Chairman,
Committee on Public Health.

THE RECOMMENDATION OF SPECIAL FITNESS FOR HEALTH AND DEVELOPMENT CERTIFICATE.

There is as yet no uniformity of opinion as to the training directors of health supervision should have. Members of the medical profession very generally believe the foundation for this "special fitness" should be the M.D. degree. Many experienced teachers believe that the training of the psychologist should constitute the basis for this work. The article printed below on standardization of this requirement would indicate that a course in general sanitation is the essential thing.

The State Board of Education has perhaps wisely refrained from declaring itself on this point at the present time. Only fifteen certificates of "special fitness" have thus far been granted, and only one of these has been granted to a person without a medical degree. The following are the holders of these certificates:

Los Angeles: Prof. Geo. L. Leslie, Dr. Laura B. Bennett, Dr. Martha S. Case, Dr. Albert W. Moore, Dr. J. S. Gowan, Dr. Herbert True, Dr. W. F. Steddom, Dr. H. B. Tebbetts, Dr. H. L. Thorpe.

Pasadena: Dr. R. C. Olmstead.

Inglewood: Dr. H. A. Putnam, Dr. S. J. Hindman.

Berkeley: Dr. Ernest B. Hoag.

Oakland: Dr. Newell K. Foster.

San Jose: Dr. N. H. Bullock.

The State Board of Education provides the following application blank:

APPLICATION TO STATE BOARD OF EDUCATION FOR RECOMMENDATION OF SPECIAL FITNESS FOR HEALTH AND DEVELOPMENT CERTIFICATE.

Name,; Address,

Birthplace,; Date of birth,

Date of California Life Diploma or California

Certificate to Practice Medicine and Surgery,

Preparation:

(Give names of institutions of which you are a graduate, naming any degrees or diplomas you have received.)

.....
.....
.....
.....

Training:

(Describe any experience or training you have had that may be considered of especial value in fitting you for this work, giving time spent, dates. etc.)
.....
.....
.....

STATE OF CALIFORNIA, }
County of } ss.

....., the applicant in the above application, being
duly sworn, says that the statements therein contained are true.

.....
Applicant.

Subscribed and sworn to before me, this day
of, 191.....
.....

(On the following lines, secure such endorsement from your county or district medical society as that body may see fit to give.)

At a meeting of the Medical Society,
held, 191..., the following resolution was passed:

[SEAL.]

.....
Secretary.

References:

(Not less than two names of persons having particular knowledge of your work, and who are qualified to give information concerning the same and your special fitness for this certificate.)
.....
.....
.....

**STANDARDIZATION OF THE HEALTH AND DEVELOPMENT
REQUIREMENT.**

JOHN NIVISON FORCE, M.D.

At the last session of the legislature a bill was passed authorizing school boards "to establish health and development supervision in the public schools of this State." The law further provides that the examining staff for health and development supervision shall consist of persons holding a life diploma of the high school or grammar grade, and persons holding a certificate to practice medicine and surgery. In addition persons so qualified must have a health and development certificate issued by county boards of education on presentation of a "recommendation from the state board of education certifying special fitness for the work." The law provides no standard of requirement by which the State Board of Education shall act in determining "special fitness," and the suggestion has been made that in choosing the medical members of the staff, the endorsement of the candidate by his county medical association be secured by the State Board of Education. This is a most excellent idea as an additional safeguard with regard to medical fitness, but takes no account of the "special fitness" desirable in dealing with problems of the public health. And by what standard are the educators to be measured? The following is an attempt to suggest a plan of procedure which will serve to standardize this requirement.

Recommendations from the State Board of Education certifying special fitness for health and development supervision in the public schools of this State will be granted only to:

(a) Persons certified by the University of California or other institu-

tion of like standing as having completed a course in hygiene covering the following subjects:

1. *Sanitary Engineering.* Elementary knowledge of the construction and sanitation of water supplies, the disposal of sewage and sewerage systems, and the disposal of refuse.

2. *Sanitary Architecture.* The plumbing, lighting, heating, and ventilation of buildings.

3. *Food Inspection.* The sanitation of the meat, milk, vegetable, and grocery supply and the detection of adulterants.

4. *Personal Hygiene.* The essentials of personal hygiene including anthropometry and the prescription of exercise.

5. *Vital Statistics.* The application of statistical methods to the conservation of the public health.

6. *Epidemiology.* The hygiene of transmissible diseases.

7. *Sanitary Law.* The health laws of the State, the school laws of the State, and the Federal laws designed to conserve the public health.

(b) Persons otherwise qualified, passing an examination in the above mentioned topics to be given by the State Board of Health.

The examination mentioned in section (b) could be given either by the State Board of Education, by the State Board of Health, by the State Board of Medical Examiners, or by the State Board of Examiners for Registration of Nurses appointed by the regents of the University.

COMMENTS.

Why the State Board of Health Endorses Medical Inspection in the Schools.—The State Board of Health is engaged in the business of preventing disease. Medical inspection, with adequate "follow-up" systems of application, constitutes the most far-reaching method of preventing disease that has been devised. There are approximately 300,000 families in California. About 75 per cent of these families are represented by children attending our schools. It is evident that a thorough system of daily inspection by teachers, medical examiners, and school nurses would make possible a sympathetic, intelligent coöperation among parents, school officers, and health officials. The remaining 25 per cent of the families of the State and the adult unmarried population are now being reached through other means. The medical inspection movement is a sane, farsighted business proposition which should receive the support of every citizen of the State.

Conservative Statistics.—Accurate statistics are always a valuable factor in winning the approval of the public in any project. Sensational statistics sometimes create widespread comment, but in so far as they tend to give exaggerated impressions they ultimately defeat their own ends. Much that has been put forward in school inspection has been of this sensational character. The work is too new, as yet, to permit of safe generalizations further than to state that there is abundant evidence that medical inspection is needed in all schools both urban and rural.

Business Methods.—The above material from the Los Angeles, Berkeley, and Oakland departments of health supervision has been printed just as it was received, because the editor believes it will show more

clearly than any general papers could the work which is being done and the difficult problems which are confronting those who have undertaken this work in California. A number of other cities, notably San Jose and Pasadena, are doing excellent work through the employment of part time of medical men. The interested reader, however, will realize that it is desirable in the near future to adopt some uniform method of administration of this most important work in our schools.

Child Conference for Research and Welfare.—This conference is one of the numerous recent organizations that have sprung into existence. It proposes to unify the various agencies for child welfare. It should absorb promptly all other organizations for the conservation of the child, or merge itself into the most promising of its allies. Correlation of effort in health conservation is the great need of the hour. We need more workers, but fewer associations to do the work. California is endeavoring to develop an affiliation of Public Health Associations. The call for an initial meeting in April has thus far met with most encouraging answers. A partial list of associations which have accepted the invitation of the State Board of Health to be represented in Sacramento, April 18, 1910, at the meeting of the California Public Health Association appears on the last page of this bulletin.

DEPARTMENT OF VITAL STATISTICS.

GEORGE D. LESLIE, STATISTICIAN.

VITAL STATISTICS FOR JANUARY.

Marriages.—The marriages reported for January number 1,747, as compared with 1,719 for the same month last year. The population of California in 1910, estimated by the Census Bureau method with slight modifications, is 2,056,190, and for this population the January marriages represent an annual rate of 10.0 per 1,000 inhabitants.

The January totals were highest for the following counties: Los Angeles, 357; San Francisco, 353; Alameda, 173; Santa Clara, 83; Sacramento, 77; and Fresno and Orange, each 65.

The aggregate for San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo) was 600.

Births.—For January there were reported 2,488 living births, against 2,405 for the same month a year ago. For an estimated population of 2,056,190 in 1910, the annual birth-rate from the January returns is 14.2 per 1,000 inhabitants.

The totals were highest for the following counties: Los Angeles, 593; San Francisco, 510; Alameda, 281; Sacramento, 98; Santa Clara, 94; Fresno, 70; and San Diego, 60.

Altogether 1,565 births were registered in the twenty-six freeholders' charter cities, the leading cities being as follows: San Francisco, 510; Los Angeles, 421; Oakland, 211; Sacramento, 69; Fresno, 45; San Diego, 37; San Jose, 30; Alameda, 27; and Pasadena, 26.

The aggregate for San Francisco and the transbay cities (Alameda, Berkeley, and Oakland) was 770, and for San Francisco and the other bay counties was 887. Similarly, the total for Los Angeles and neighboring chartered cities (Long Beach, Pasadena, and Santa Monica) was 469, and for the entire county was 593.

Deaths.—Altogether 2,833 deaths, exclusive of stillbirths, were reported for January, as compared with 2,622 for the same month the year before. This total represents an annual death-rate of 16.2 per 1,000 inhabitants on the basis of an estimated State population of 2,056,190 for 1910.

The death totals were highest for the following counties: Los Angeles, 690; San Francisco, 600; Alameda, 315; Santa Clara, 113; San Bernardino, 90; Sacramento, 89; San Joaquin, 78; San Diego, 77; and Fresno, 70.

There were altogether 1,729 deaths in the twenty-six chartered cities, the highest totals being as follows: San Francisco, 600; Los Angeles, 440; Oakland, 201; San Diego, 60; Sacramento, 58; Pasadena, 51; Stockton, 43; Berkeley, 34; Alameda, 33; and San Bernardino and San Jose, each 27.

The aggregate for the urban district (San Francisco and the transbay cities) was 868, and for the entire metropolitan area (San Francisco and

the other bay counties) was 989. Similarly, the total for Los Angeles and neighboring chartered cities was 520, and for the whole county was 690.

Causes of Death.—For January there were reported 455 deaths, or 16.1 per cent of all, from diseases of the circulatory system, and 453, or 16.0 per cent, from various forms of tuberculosis, heart disease thus leading tuberculosis slightly as in recent months.

Other notable causes of death in January were as follows: Diseases of the respiratory system, 426; diseases of the nervous system, 271; violence, 259; diseases of the digestive system, 189; Bright's disease and nephritis, 165; cancer, 162; and epidemic diseases, 99.

The leading epidemic diseases were typhoid fever and measles, each 21, followed by whooping-cough, 12; diphtheria and croup, 11; scarlet fever, 10; and all other epidemic diseases, 24.

The 21 deaths from measles occurred in only five counties, 16 being in Los Angeles county.

The 21 deaths from typhoid fever, however, were distributed among fifteen counties, as follows: Alameda and Los Angeles, each 3; Fresno and Kern, each 2; and Colusa, Contra Costa, Kings, Orange, Placer, Sacramento, San Francisco, San Joaquin, Santa Clara, Sonoma, and Tulare, 1 each.

Further particulars appear in the following table:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths for Current and Preceding Month, for California: January.

Cause of Death.	Deaths: January.	Proportion per 1,000.	
		January.	December.
ALL CAUSES.....	2,833	1,000.0	1,000.0
Typhoid fever	21	7.4	17.4
Malarial fever	4	1.4	4.0
Smallpox	1	0.4
Measles	21	7.4	3.0
Scarlet fever	10	3.5	1.7
Whooping-cough	12	4.2	5.7
Diphtheria and croup	11	3.9	8.4
Influenza	9	3.2	3.7
Other epidemic diseases	10	3.5	3.3
Tuberculosis of lungs	404	142.6	123.2
Tuberculosis of other organs	49	17.3	18.1
Cancer	162	57.2	63.8
Other general diseases	110	38.8	32.9
Meningitis	29	10.2	9.4
Other diseases of nervous system	242	85.4	83.9
Diseases of circulatory system	455	160.6	174.2
Pneumonia and broncho-pneumonia	331	116.8	96.0
Other diseases of respiratory system	95	33.5	31.9
Diarrhea and enteritis, under 2 years	49	17.3	27.5
Diarrhea and enteritis, 2 years and over	18	6.4	7.7
Other diseases of digestive system	122	43.1	47.0
Bright's disease and nephritis	165	58.3	58.0
Childbirth	20	7.1	13.1
Diseases of early infancy	92	32.5	25.5
Suicide	65	22.9	19.5
Other violence	194	68.5	75.5
All other causes	132	46.6	45.6

Geographic Divisions.—Data for geographic divisions, including the metropolitan area, or “Greater San Francisco,” are as follows:

Deaths from Main Classes of Diseases, for Geographic Divisions: January.

Geographic Division.	DEATHS: JANUARY.										
	All Causes	Epidemic Diseases	Tuberculosis (All Forms)	Cancer	Diseases of Nervous System	Diseases of Circulatory System	Diseases of Respiratory System	Diseases of Digestive System	Bright's Disease and Nephritis	Violence	All Other Causes
THE STATE	2,833	99	453	162	271	455	426	189	165	259	354
Northern California	274	9	27	13	34	42	50	18	9	30	42
Coast counties	134	6	16	8	23	20	20	10	7	10	14
Interior counties	140	3	11	5	11	22	30	8	2	20	28
Central California	1,596	51	236	88	135	272	250	110	102	152	200
San Francisco	600	10	93	38	36	112	93	46	38	70	64
Other bay counties	389	13	55	17	31	59	60	20	30	38	66
Coast counties	185	9	28	10	26	32	25	9	15	9	22
Interior counties	422	19	60	23	42	69	72	35	19	35	48
Southern California	963	39	190	61	102	141	126	61	54	77	112
Los Angeles	690	30	139	50	64	100	77	50	42	58	80
Other counties	273	9	51	11	38	41	49	11	12	19	32
Northern and Central California	1,870	60	263	101	169	314	300	128	111	182	242
Metropolitan area	989	23	148	55	67	171	153	66	68	108	130
Rural counties	881	37	115	46	102	143	147	62	43	74	112

DEPARTMENT OF BACTERIOLOGY.

DR. A. R. WARD, DIRECTOR.

EXAMINATIONS MADE DURING JANUARY, 1910.

	Ex.-Pos.	Ex.-Neg.	Total.
Diphtheria	23	128	151
Malaria	2	3	5
Tuberculosis	8	21	29
Typhoid	5	7	12
Water	--	--	5
Miscellaneous	--	--	3
Rabies	--	--	2
Total			207

DEPARTMENT OF PURE FOODS AND DRUGS.

PROFESSOR M. E. JAFFA, DIRECTOR.

A CAUTION TO HOTEL, BOARDING HOUSE, AND RESTAURANT PROPRIETORS.

The attention of this laboratory has just been called to a compound which some might term a "butter increaser." According to statements appearing on the label, it is possible to take one pound of butter, together with one pint of milk, and, with the addition of a small quantity of the compound, make a product weighing two pounds, the inference being, of course, that the product will be two pounds of butter.

A pound of butter should contain, according to the standards, at least 13.2 ounces of fat, the other 2.8 ounces consisting mainly of brine necessary to give palatability to the fat. Two pounds of butter should therefore contain at least 26.4 ounces of fat. Two pounds of butter resulting from the treatment of a mixture of butter and milk could not contain more fat than that which was originally in the butter, plus that which was originally in the milk. The fat in a pint of milk would be, except in exceedingly rich milks, less than one ounce. Two thirds of an ounce would represent a rich milk. It is thus seen that the total amount of fat in the finished product, under the best conditions, from the above treatment, could not exceed 15 ounces. In other words, the resulting product would not contain more than 40 per cent of the amount of fat called for by the standards for butter, and as a rule will contain less than 50 per cent of the requisite amount.

The analysis of the product said to have been made by the treatment of the aforesaid compound is as follows:

Water	49.20
Ash	1.97
Casein, etc.	9.10
Fat	39.73

If such a product were served by restaurant keepers, they would be violating the State law, and would be prosecuted by the State Board of Health.

In view of the publicity given to such "butter increasers" by the United States Department of Agriculture and by some of the Agricultural Experiment Stations, it would hardly be expected that there would be any further sale for such articles.

Three Food Inspections Decisions, numbers 111-112-113, have been received from the United States Department of Agriculture since the issue of the last Monthly Bulletin. These are all of more or less importance to manufacturers and dealers in this State, and are therefore reprinted, numbers 111 and 113 in full, number 112 in part. The latter is, perhaps, of special value to druggists, and it might be said that the only part of the Decision left out is the Regulation 28, with which most of the druggists are familiar. If, however, there are any who wish a complete copy of this decision, it can be obtained by addressing the director of the State Food and Drug Laboratory, Berkeley, California.

Food Inspection Decision 113 is of importance to all those who are in any way interested in the manufacture or sale of whisky.

The Laboratory is also in receipt of forty-two Notices of Judgments, numbers 123 to 164, inclusive. These notices cover a large variety of foods, and in view of the fact that there have been so many received during the past month, it is impossible to reprint them even to the extent that previous Notices of Judgments have been printed in these Bulletins. In one or two notices, where it has been deemed of sufficient importance, more or less extended notice is taken of some of these publications. Those who are particularly interested in any one judgment, or judgments, may obtain the same by addressing the director of the State Food and Drug Laboratory, Berkeley, Calif.

FOOD INSPECTION DECISION NO. 111.

THE LABELING OF YEAST.

On August 3, 1909, a hearing was held before the Board of Food and Drug Inspection on the application of the Food and Drugs Act of June 30, 1906 to the sale in interstate commerce of compressed yeast. Other investigations along the same line have been made by the Department, and as a result of the hearing and of these investigations the position of the Department is:

1. That the term "compressed yeast," without qualification, means distillers' yeast without admixture of starch.
2. That if starch and distillers' yeast be mixed and compressed such product is misbranded if labeled or sold simply under the name "compressed yeast." Such a mixture or compound should be labeled "compressed yeast and starch."
3. That it is unlawful to sell decomposed yeast under any label.

FOOD INSPECTION DECISION NO. 112.

AMENDMENT TO REGULATION 28 (LABELING OF DERIVATIVES).

Section 8 of the Food and Drugs Act of June 30, 1906, paragraph "Second," under "Drugs," provides that a drug shall be deemed to be misbranded "if the package fail to bear a statement on the label of the quantity or proportion of any alcohol, morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide, or any derivative or preparation of any such substances contained therein."

In an opinion rendered January 15, 1909, the Attorney General held that a derivative within the meaning of this section of the act is a substance which is so related to one of the specified substances "that it would be rightly regarded by recognized authorities in chemistry as obtained from the latter 'by actual or theoretical substitution,' and it is not indispensable that it should be actually produced therefrom as a matter of fact;" and, further, that the labeling of derivatives, as prescribed by this section, is a proper subject conferred upon them by section 3, and that a rule or regulation requiring the name of the specified substance to follow that of the derivative would be in harmony with the general purpose of the act, and an appropriate method by which to give effect to its provisions.

In conformity with this opinion, the Board of Food and Drug Inspection recommends that Regulation 28 of the Rules and Regulations for the enforcement of the Food and Drugs Act, published in Circular 21 of the Office of the Secretary, be amended by the addition, to follow paragraph (f), of a new paragraph to be designated as paragraph (g), reading as follows:

(g) In declaring the quantity or proportion of any of the special substances the names by which they are designated in the act shall be used, and in declaring the quantity or proportion of derivatives of any of the specified substances, in addition to the trade name of the derivative, the name of the specified substance shall also be stated, so as to indicate clearly that the product is a derivative of the particular specified substance.

This paragraph (g) prescribes, in effect, that in labeling derivatives the name of the specified substance must be stated, so as to clearly indicate that the product is a derivative of the particular substance named in the act.

Regulation 28 as amended shall be effective on and after April 1, 1910.

FOOD INSPECTION DECISION NO. 113.

THE LABELING OF WHISKY, MIXTURES, AND IMITATIONS THEREOF, UNDER THE FOOD AND DRUGS ACT OF JUNE 30, 1906.

Under the Food and Drugs Act of June 30, 1906, all unmixed distilled spirits from grain, colored and flavored with harmless color and flavor, in the customary

ways, either by the charred barrel process, or by the addition of caramel and harmless flavor, if of potable strength and not less than 80° proof, are entitled to the name whisky without qualification. If the proof be less than 80°, *i.e.*, if more water be added, the actual proof must be stated upon the label, and this requirement applies as well to blends and compounds of whisky.

Whiskies of the same or different kinds, *i.e.*, straight whisky, rectified whisky, redistilled whisky and neutral spirits whisky are like substances and mixtures of such whiskies, with or without harmless color or flavor used for purposes of coloring and flavoring only, are blends under the law and must be so labeled. In labeling blends the act requires two things to be stated upon the label to bring the blended product within the exception provided by the statute: First, the blend must be labeled, branded or tagged so as to plainly indicate that it is a blend, in other words, that it is composed of two or more like substances, which in the case of whisky must each be of itself a whisky, and second, the word "blend" must be plainly stated upon the package in which the mixture is offered for sale. A mixture of whiskies, therefore, with or without harmless coloring or flavoring, used for coloring and flavoring only, is correctly labeled "Kerwan Whisky. A Blend of Whiskies."

Since the term whisky is restricted to distillates from grain, and distillates from other sources are unlike substances to distillates from grain, such distillates from other sources without admixture with grain distillates are misbranded if labeled whisky without qualification, or as a blend of whiskies. However, mixtures of whisky, with a potable alcoholic distillate from sources other than grain, such as cane, fruit or vegetables, are not misbranded if labeled "Compound Whisky," provided the following requirements of the law are complied with: First, that the product shall be labeled, branded or tagged so as to plainly indicate that it is a compound, *i.e.*, not a mixture of like substances, in this case whiskies; and, second, that the word "compound" is plainly stated upon the package in which the mixture is offered for sale. For example, a mixture of whisky, in quantity sufficient to dominate the character of the mixture, with a potable alcoholic distillate from sources other than grain and including harmless color and flavor is correctly labeled "Kerwan Whisky. A compound of whisky and cane distillate." Unmixed potable alcoholic distillates from sources other than grain, with or without harmless color or flavor, are not misbranded if labeled "Imitation Whisky."

When an essence or oil is added to a distillate of grain, which without such addition is entitled to the name whisky, and the effect of such addition is to produce a product which simulates a whisky of another kind different from the kind of whisky to which the essence is added, the mixture is an imitation of the particular kind of whisky which is simulated, *e.g.*, if rye essence be added to a highly rectified distillate of corn, the mixture is misbranded if labeled rye whisky. Such a mixture is not misbranded if labeled "Whisky—Imitation Rye."

Nothing in the Food and Drug Act inhibits any truthful statement upon the label of any product subject to its terms, such as the particular kind or kinds of whisky, vended as whisky or as blends or compounds thereof, but when descriptive matter, qualifying the name whisky, is placed upon the label, it must be strictly true, and not misleading in any particular. The law makes no allowance for seller's praise upon the label, if false or misleading, and the product is misbranded if a false or misleading statement be made upon one part of the label and the truth about the product be stated upon another part. Similarly, a product is misbranded if the label is false or misleading through the use of a trade-marked statement, design or device. The fact that a phrase, design or device is registered in the U. S. Patent Office gives no license for its deceptive use. All descriptive matter qualifying or particularizing the kind of whisky, whether volunteered or required by the law to be stated, as in the case of blends and compounds, must be given due prominence as compared with the size of type and the background in which the name whisky appears, so that the label as a whole shall not be misleading in any particular.

Food Inspection Decisions 45, 65, 95, and 98, and all rulings in conflict herewith, are hereby revoked.

Notice of Judgment No. 123.—Adulteration and Misbranding of Vanilla Extract. (Total absence of extract of the vanilla bean and the presence of artificial coloring matter.)

Notice of Judgment No. 124.—Adulteration and Misbranding of Buckwheat Flour. (Contains wheat flour.)

Notice of Judgment No. 125.—Adulteration of Milk. (Added water.)

Notice of Judgment No. 126.—Misbranding of Canned Corn. (Underweight.)

Notice of Judgment No. 127.—Adulteration and Misbranding of Syrup. (Contains 28 per cent glucose.)

Notice of Judgment No. 128.—Misbranding of Canned Corn. (Underweight.)

Notice of Judgment No. 129.—Adulteration and Misbranding of Buckwheat Flour. (As to presence of wheat flour.)

Notice of Judgment No. 130.—Adulteration and Misbranding of Lemon Extract. (Contains no oil of lemon and is artificially colored.)

Notice of Judgment No. 131.—Misbranding and Adulteration of Rye Flour. (Added mixture of wheat flour.)

Notice of Judgment No. 132.—Adulteration of Milk. (Low percentage of fat. Added water.)

Notice of Judgment No. 133.—Adulteration and Misbranding of Olive Oil. (A mixture of cotton seed and olive oils.)

Notice of Judgment No. 134.—Misbranding of Buchu Gin. (False claims as to medicinal value.)

Notice of Judgment No. 135.—Misbranding of Vanilla Extract. (Total absence of extract of the vanilla bean. Artificially colored.)

Notice of Judgment No. 136.—Adulteration and Misbranding of Lemon Extract. (Absence of lemon oil and citral.)

Notice of Judgment No. 137.—Misbranding of Cheese. (Underweight.)

Notice of Judgment No. 138.—Misbranding of Cheese. (Underweight.)

The following is a list of the persons accused, the foods found to be adulterated or mislabeled, and the nature of the offenses, which were included in the report of the Director of the State Laboratory to this Board on February 14, 1910. These persons were afforded an opportunity to be heard before this board, as provided in said act, on March 5, 1910, and after such hearing, the findings of the Director being sustained, these cases were referred to the district attorneys of the several counties for prosecution:

Certificate No.	Material.	Violation.	Name of Dealer.	Locality.
806	Prepared mustard -----	Mislabeled. Turmeric -----	R. G. Dupuy -----	San Pedro
810	Catsup -----	Mislabeled. Contains benzoates -----	John Saferis -----	Los Angeles
811	Olive oil -----	Adulterated and mislabeled. Cotton seed oil -----	Godfrey's Restaurant -----	Los Angeles
812	White pepper -----	Adulterated. Cereal -----	R. G. Dupuy -----	San Pedro
813	Vinegar -----	Mislabeled. Below standard -----	Spangler & Dodge -----	Pasadena
814	Vinegar -----	Mislabeled. Below standard -----	A. & H. Preserve Co. -----	San Francisco
815	Vinegar -----	Mislabeled. Below standard -----	G. W. Murphy -----	San Francisco
816	Vinegar -----	Mislabeled. Below standard -----	J. M. Meyer & Co. -----	San Francisco
817	Vinegar -----	Mislabeled. Below standard -----	Kelly & Brown -----	Marysville
820	Maple syrup -----	Mislabeled and adulterated. Below standard. Ash -----	Vermont Syrup Co. -----	San Francisco
821	Prepared mustard -----	Mislabeled. Turmeric -----	Wm. Wagner Co. -----	San Francisco
824	Catsup -----	Mislabeled. Benzoates -----	Plaza Restaurant -----	Los Angeles
826	Prepared mustard -----	Mislabeled. Turmeric -----	C. Coleman -----	San Francisco
827	Essence of Raspberry -----	Adulterated. Coal-tar dye -----	Brunswig Drug Co. -----	Los Angeles
828	Storage chicken -----	Mislabeled. No label -----	Pacific Produce Co. -----	Los Angeles
830	Vinegar -----	Mislabeled. Below standard. Ash -----	Bryant Bros. -----	Marysville
831	Ginger ale -----	Adulterated. Salicylic acid -----	Paul Chase -----	San Diego
832	Paregoric -----	Mislabeled. Ethyl alcohol. Opium -----	Hindle & Co. -----	Vista
833	Extract peppermint -----	Mislabeled. Below standard -----	N. Hart -----	Anaheim
834	Butter -----	Mislabeled. Below standard -----	J. H. Bachman -----	Garden Grove
835	Butter -----	Mislabeled. Below standard -----	C. I. Pond -----	Santa Ana

DEPARTMENT OF EPIDEMIOLOGY.

WILLIAM F. SNOW.

The following foci of communicable diseases were reported to the Board for investigation during the month of January:

Smallpox, 8.
Diphtheria, 9.
Typhoid fever, 7.
Scarlet fever, 5.
Measles, 17.
Whooping-cough, 3.

The morbidity statistics of the State Board are as yet valueless, except as evidence of an effort on the part of the Board to build up this important division of its work. Next month the Board will begin a tabulated report of location and chronological appearance of communicable disease outbreaks.

The following letter was sent out during the month to health officers of the State:

"To the Health Officers of California.

DEAR DOCTOR: Many requests have reached the State Board of Health for a ruling upon the quarantine of measles. The Board accordingly sends out the following outline for procedure in dealing with measles cases, with a request that it be followed in all instances, or that you communicate with the Board, stating your reasons for any other procedure which you may consider adequate and more satisfactory:

Measles patients should be strictly isolated from the earliest suspicion of the disease to the time when desquamation is entirely completed and there are no remaining evidences of involvement of mucus membranes of the head, throat and respiratory passages. Even in mild cases it is not likely that these conditions can be met inside of fifteen to twenty days; and if cases are not under the constant observation of a careful physician and nurse, the isolation period should be not less than twenty-one days from the date of eruption. If it were possible to obtain the coöperation of every one so that each person exposed could also be isolated for one week prior to possible eruption, measles could undoubtedly be stamped out promptly in any community.

Health Officers should instruct teachers, librarians, and persons responsible for public entertainments to watch for children with the typical preliminary "cold" symptoms and cough, and each teacher should be encouraged to require children presenting these symptoms from ten to fourteen days after a measles case has appeared in her room to remain at home until a physician has passed judgment upon the possibility of measles.

The Secretary will be glad to correspond with any Health Officer relative to this matter of controlling measles.

Very truly yours,

WILLIAM F. SNOW,
Secretary."

CALIFORNIA STATE BOARD OF HEALTH.

PARTIAL LIST OF PUBLIC HEALTH ORGANIZATIONS OF CALIFORNIA.

1. General.
California Public Health Association.
Public Health Commission of State Medical Society.
2. For the Prevention of Tuberculosis.
California Association for the Study and Prevention of Tuberculosis.
Affiliated societies: Alameda County ..; Long Beach ..; Los Angeles ..; Monrovia (Visiting Nurses' Association); Pasadena ..; Redlands ..; Sacramento (White Crusaders); San Diego ..; San Francisco ..; Santa Ana ..; Santa Barbara ..; Sierra Madre ...
3. For the Prevention of Syphilis and Gonorrhea.
California Association for the Study and Prevention of Syphilis and Gonorrhea (R. A. Archibald, M.D., Secretary, Health Office, Oakland, Cal.).
4. Other Organizations carrying on Important Public Health Work.
 1. California Federation of Women's Clubs.
 2. California Teachers' Association (L. E. Armstrong, Secretary, Oakland, Cal.).
 3. California Press Association (F. W. Richardson, President, Berkeley, Cal.).
 4. Board of Charities and Corrections (W. S. Gates, Secretary, San Francisco).
 5. California Playground Association (F. W. D'Evelyn, M.D., Secretary, 1214 Polk street, San Francisco).
 6. Red Cross Society and Divisions.
 7. White Crusaders. (W. A. Briggs, M.D., President, Sacramento, Cal.).
 8. Volunteers of America.
 9. Salvation Army.
 10. Juvenile Courts.

This list is only partially completed and will be repeated, with additions, next month. Any letters or questions sent to the Board will be answered or referred to the above mentioned organizations.

PARTIAL LIST OF CITY HEALTH OFFICERS.

Alameda.....	Dr. L. W. Stidham	Monterey.....	Martin Birks
Alhambra.....	Dr. F. E. Corey	Morgan Hill.....	Dr. D. W. Watt
Alturas.....	Dr. John Stile	Mountain View.....	Dr. Philo Hull
Anaheim.....	Dr. J. L. Beebe	Napa.....	F. R. Starke
Antioch.....	E. C. Worrell	National City.....	Dr. Theo. F. Johnson
Azusa.....	Dr. S. A. Ellis	Nevada City.....	Hugh Murchie
Berkeley.....	Dr. J. J. Benton	Oakland.....	Dr. E. N. Ewer
Biggs.....	Dr. B. Caldwell	Ontario.....	Dr. C. S. Orr
Black Diamond.....	Dr. F. S. Gregory	Orange.....	Dr. Ida B. Parker
Bakersfield.....	J. E. Yancey	Oroville.....	Dr. W. F. Gates
Chico.....	G. H. Taylor	Oxnard.....	Dr. Ralph W. Avery
Colusa.....	Dr. W. T. Rathbun	Pacific Grove.....	Dr. H. N. Yates
Coronado.....	Dr. Raffaele Lorini	Palo Alto.....	Dr. Chas. Boxmeyer
Dixon.....	W. C. Rhem	Pasadena.....	Dr. Stanley P. Black
East San Jose.....	Dr. W. A. Low	Petaluma.....	Dr. R. B. Duncan
Elsinore.....	Dr. S. E. Ball	Placerville.....	Robert L. Crocker
Escondido.....	Dr. David Crise	Pomona.....	Dr. T. J. Wilson
Etna.....	Dr. W. H. Haines	Piedmont.....	Geo. T. Burtchael
Eureka.....	Dr. W. L. Perrott	Redding.....	L. D. Poole
Fairfield.....	Dr. S. G. Bransford	Redlands.....	Dr. J. M. Wheat
Ferndale.....	Dr. L. Michael	Redondo Beach.....	Dr. D. R. Hancock
Fort Jones.....	Thos. Bransom	Richmond.....	Dr. H. N. Barney
Fresno.....	Dr. Geo. H. Aiken	Riverside.....	Dr. Thos. R. Griffith
Gilroy.....	Dr. Jonas Clark	Sacramento.....	Dr. Wm. K. Lindsay
Glendale.....	R. E. Chase	Salinas.....	Dr. Garth Parker
Grass Valley.....	Dr. J. T. Jones	San Bernardino.....	Dr. J. G. Ham
Hayward.....	Dr. F. W. Browning	San Diego.....	Dr. F. H. Mead
Healdsburg.....	Dr. O. C. Hueb	San Francisco.....	Dr. W. F. McNutt, Jr.
Hermosa Beach.....	H. Vetter	San Jose.....	Dr. A. L. Cothran
Hollywood.....	E. O. Palmer	San Jacinto.....	Charles Long
Huntington Park.....	Dr. W. Thompson	Santa Ana.....	Dr. J. I. Clark
Lakeport.....	Dr. H. P. Stippe	Santa Barbara.....	Dr. Benjamin Bakewell
Livermore.....	Dr. H. G. McGill	Santa Cruz.....	Dr. C. H. Anderson
Lodi.....	Dr. F. W. Colman	Santa Monica.....	Dr. W. H. Parker
Long Beach.....	Dr. W. H. Newman	Santa Rosa.....	Dr. J. W. Jesse
Los Angeles.....	Dr. L. M. Powers	Sisson.....	Dr. L. Gouzuet
Los Gatos.....	Dr. Elenor S. Yelland	South Pasadena.....	Dr. C. A. Whiting
Madera.....	Dr. Mary R. Butin	Stockton.....	Dr. S. W. R. Langdon
Martinez.....	Dr. E. E. Brown	Turlock.....	Dr. E. L. Clough
Merced.....	Dr. C. H. Castle	Vallejo.....	Dr. F. T. Bond
Mill Valley.....	Capt. M. Staples	Watsonville.....	Dr. F. H. Koepke
Modesto.....	Dr. F. R. De Lappe	Yreka.....	Dr. A. J. Collar

LIST OF COUNTY HEALTH OFFICERS.

<i>County.</i>	<i>Health Officer.</i>	<i>Address.</i>
Alameda	Dr. C. L. McKown.....	Niles
Alpine		
Amador	Dr. E. E. Endicott.....	Jackson
Butte	Dr. L. Q. Thompson.....	Oroville
Calaveras	Dr. E. W. Weirich.....	Angels Camp
Colusa	Dr. W. T. Rathbun.....	Colusa
Contra Costa	Dr. J. Wallace DeWitt.....	Antioch
Del Norte		
El Dorado	Dr. S. H. Rantz.....	Placerville
Fresno	Dr. G. L. Long.....	Fresno
Glenn	Dr. J. A. Randolph.....	Willows
Humboldt	Dr. J. H. Mallery.....	Eureka
Imperial	Dr. E. E. Patten.....	Imperial
Inyo	Dr. I. J. Woodin.....	Independence
Kern	Dr. W. S. Fowler.....	Bakersfield
Kings	Dr. W. H. Miller.....	Hanford
Lake	Dr. W. E. Upton.....	Kelseyville
Lassen	Dr. E. C. Houston.....	Bieber
Los Angeles	Dr. O. R. Stafford.....	3754 Vermont ave., Los Angeles
Madera	Dr. Mary R. Butin.....	Madera
Marin	Dr. J. H. Kuser.....	Novato
Mariposa	Dr. H. Kylberg.....	Mariposa
Mendocino	Dr. John S. Hogshead.....	Ukiah
Merced	Dr. W. E. Lilley.....	Merced
Modoc	Dr John Stile.....	Alturas
Mono		
Monterey	Dr. Garth Parker.....	Salinas
Napa	Dr. Adolph J. Kahn (County Physician).....	Napa
Nevada	Dr. John T. Jones.....	Grass Valley
Orange	Dr. C. D. Ball.....	Santa Ana
Placer	Dr. G. H. Fay.....	Auburn
Plumas	Dr. G. B. Lasswell.....	Quincy
Riverside	Dr. Geo. E. Tucker.....	Riverside
Sacramento	Dr. Hugh Beattie.....	Elk Grove
San Benito	Dr. R. G. Curtis.....	Hollister
San Bernardino	Dr. D. C. Strong.....	San Bernardino
San Diego		
San Francisco	Dr. W. F. McNutt, Jr.....	San Francisco
San Joaquin	Dr. R. B. Knight.....	Stockton
San Luis Obispo.....		
San Mateo	Dr. W. G. Beattie.....	Colma
Santa Barbara	Dr. J. C. Bainbridge.....	Santa Barbara
Santa Clara	Dr. Wm. Simpson.....	San Jose
Santa Cruz		
Shasta	Dr. F. Stabel.....	Redding
Sierra	Dr. R. B. Davy.....	Downieville
Siskiyou	Dr. F. J. McNulty (County Physician).....	Yreka
Solano	Dr. S. G. Bransford.....	Suisun
Sonoma	Dr. S. S. Bogle.....	Santa Rosa
Stanislaus	Dr. F. R. De Lappe.....	Modesto
Sutter	Dr. J. McFadyen.....	Yuba City
Tehama	Dr. A. P. Tarter.....	Tehama
Trinity	Dr. D. B. Fields.....	Weaverville
Tulare	Dr. F. A. Coombs.....	Visalia
Tuolumne	Dr. C. E. Congdon.....	Jamestown
Ventura	Dr. A. A. Maulhardt.....	Oxnard
Yolo	Dr. A. E. Blevins.....	Woodland
Yuba	Dr. J. H. Barr.....	Marysville

THE CALIFORNIA STATE BOARD OF HEALTH BULLETIN WILL BE SENT FREE TO ANY CITIZEN OF THE STATE ON REQUEST.